LESHKOVTSEV, V. A.

33916. Issledovaniye Fyeaktsiy Tipa (d,p) Na Magnii, Aluminii, Kryemnii, I Kislorodye. (Iz. Tyekushchyey Lityeratury) Uspyekhi Fiz. Nauk, T. XXIX, VY. 2, 1949. C. 307-13.--Bibliogr: C. 312-13.

SO: Letopis' Zhurnal'nykh Statey, Vol. 46, Moskva, 1949.

LESHKOVTSEV, V.

24769. LESHKOVTSEV, V. K-Spektr Elementa No. 61. Uspekhi Fiz. Nauk, T. XXXVII, VYP. 3, 1949. S. 444-46.

SO: Letopis' No. 33, 1949

LESHCHTSEV, V.

24770. LESHCHTSEV, V. O Raspredeleniye Tampelki Fiz. Mauk. T. XXXVIII
VYP. 3. 1949. S 456-57.--Bibliogr: 5 NAZV.

SO: Letopis' No. 33, 1949

LESHKOVTSEV, V.

PA 51/49T76

USSR/Physics
Ultrasonic Waves

Jun 49

"Absorption of Ultrasonic Waves by Monocrystals,"
V. Leshkovtsev, 2 pp

"Uspekhi Fiz Nauk" Vol XXXVIII, No 2

Describes S. Ya. Sokolov's method for measuring subject phenomena. A piezoelectric quartz slab much smaller than the monocrystal was pressed tightly against the monocrystal surface and ultrasonic impulses of one microsecond or less were applied. Frequency varied from $1.6 \cdot 10^7$ to $1 \cdot 10^9$ cycles. After passing through the monocrystal, ultrasonic

51/49T76

USSR/Physics (Contd) Jun 49

impulses were amplified and registered by a cathode oscilloscope. Number of pips is a measure of absorption in the crystal, and distance between adjacent pips shows path taken by ultrasonic impulses.

51/49T76

LESHKOVTSEV, V.

PA 51/49T69

USSR/Physics Jun 49
Microscope, Ultrasonic

"The Ultrasonic Microscope," V. Leshkovtsev, 1 p

"Uspekhi Fiz Nauk" Vol XXXVIII, No 2

Gives operating principles of ultrasonic microscope, which makes use of two piezoelectric quartz slabs, an acoustic lens, and two cathode-ray tubes. Frequency of ultrasonic waves used is $3 \cdot 10^9$ cycles. With aid of this microscope, magnified images of objects and heterogeneities encountered in optically nontransparent media may be obtained. Shows microscopic image of metallic loop immersed in transformer oil.

51/49T69

LESHKOVTSEV, V. 168T84

USSR/Physics - New Techniques Aug 50
Molecular Rays

"New Method for Obtaining Molecular Rays," V. Leshkovtsev

"Uspekh Fiz Nauk" Vol XLI, No 4, pp 545-546

Abstracts two articles: D. L. Simonenko in "Zhur Eksper i Teoret Fiz" Vol XX, No 5, 1950, p 385; E.W. Shpol'skiy's "Atomnaya Fizika" Vol I, Sec 9, Gostekhizdat, 1949. Subject method is used to study hyperfine structure of spectra, nuclear spin, magnetic moments of nuclei, etc. Present limitations: very low intensity, difficulty of obtaining monochromaticity, and regulation of particles velocity.

168T84

[illegible], V. A.

Optics, Physical

Achievement of S. I. Vavilov in physical optics., Fiz. v shkole., no. 5, [illegible].

Monthly list of Russian accessions, Library of Congress, March 1954. Unclassified.

1. LESHKOVTSEV, V. A.

2. USSR (600)

4. Kuznetsov, B. G.

7. "Frederic Joliot-Curie, scientist and fighter for peace." B. G. Kuznetsov. Reviewed by V. A. Lashkovtsev. Usp fiz nauk No. 4 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

1. LESHKOVTSEV, V. A.

2. USSR (600)

4. Physicists

7. Frederic Joliot-Curie. Fiz. v shkole, 12, No. 6, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

1. LESHKOVTSEV, V. I.PAKHLIN

2. USSR (600)

4. Strogova, E.

7. Unsuccessful book for students. ("How Discoveries are Made." Ye. Strogova. Reviewed by V. Leshkovtsev, I. Pakhlin.) Fiz. v shkole 12 no.6, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

[redacted], V. A.

United States - Atomic Energy

Atomic energy in the service of American imperialism. [illegible], 1952.

MONTHLY LIST OF RU[illegible] ACCESSIONS. Library of Congress. November 1952. UNCLASSIFIED.

LESHKOVTSEV, V.

Nurtrons

Existence of "bi-neurtrons." Usp. fiz. nauk 46 No. 3, 1952

Monthly List of Russian Accessions, Library of Congress, August, 1952 UNCL.

1. [illegible]SHKOVTSEV, V.

2. USSR (600)

4. Spectrum Analysis

7. Optical spectrum of the "exciton". Usp. fiz. nauk. 48. no. 1. 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

YEL'YASHEVICH, M.A.; LESHKOVTSEV, V.A.

[Spectra of rare earths] Spektry redkikh zemel'. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1953. 456 p. (MLRA 7:3)
(Earths, Rare)

LESHKOVTSEV, V.A.

KITAYGORODSKIY, Aleksandr Isaakovich, doktor fiziko-matematicheskikh nauk, professor; LESHKOVTSEV, V.A., redaktor; KIPNIS, S.Ye., redaktor; DMITRIYEVA, R.V., tekhnicheskiy redaktor.

[Physical principles of atomic energy] Fizicheskie osnovy iadernoi energetiki. Moskva, Izd-vo "Znanie," 1954. 38 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii, Ser. 3, no.57)

(Atomic energy) (MLRA 7:12)

V 7897

ATOMIC ENERGY. V. A. Leshkovtsev. Moscow, Gosteknizdat, 1954. 72p. (In Russian) (Book on display at Geneva Conference)

A popular booklet on some of the problems of nuclear physics: the structure of the atom and the atomic nucleus, nuclear transformations, and methods of generating nuclear energy. Nuclear fission and the possible applications of atomic energy. (publisher's note)

DOBROTIN, N.A.; LESHKOVTSEV, V.A., redaktor; AKHLAMOV, S.N., tekhn.-cheskiy redaktor.

[Cosmic rays] Kosmicheskie luchi. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1954. 320 p. (MLRA 8:1)
(Cosmic rays)

IRASIL'NIKOV, V.A.; LESHKOVTSEV, V.A., redaktor; GAVRILOV, S.S., tekhnicheskiy redaktor

[Sound waves in the air, water and solid bodies] Zvukovye volny v vozdukhe, vode i tverdykh telakh. Izd. 2-e, perer. Moskva, Gos. izd-vo tekhn.-teoret. lit-ry, 1954. 439 p. [Microfilm] (MIRA 7:10)
(Sound waves)

TAMM, I.Ye.; LESHKOVTSEV, V.A., redaktor; GAVRILOV, S.S., tekhnicheskiy redaktor

[Basic theory of electricity] Osnovy teorii elektrichestva. Izd. 5-e. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1954. 620 p. (Electricity) (MLRA 7:11)

WEISSKOPF, Victor F.; BLATT, John M.; LESHKOVTSEV, V.A., redaktor; GERASIMOVA, Ye.S., tekhnicheskiy redaktor.

[Theoretical nuclear physics] Teoreticheskaia iadernaia fizika. Perevod s angliiskogo. Moskva, Izd-vo inostrannoi lit-ry, 1954. 658 p.
(Nuclear physics) (MLRA 6:4)

LESHKOVTSEV, V.

Atomic explosions and their after-effects. Kryl.rod. 5 no.7:
16-17 Jl '54. (MLRA 7:7)
(Atomic bomb)

LESHKOVTSEV, V.

Atomic energy serves man. Kryl.rod. 5 no.9:19-21 S '54.(MLRA 7:9)
(Atomic power)

Summary of article D-179383, 10 Jan 55

AID P - 274

Subject : USSR/Aeronautics

Card : 1/3

Periodical : Kryl. Rod., 7, 1-24, Jy 1954

Abstract : One article from this issue has been processed on a separate card as AID P - 273. The remainder are listed only on the following Table of Contents:

Kryl. Rod., 7, 1-24, Jy 1954 (additional card)

Card : 2/3

LESHKOVTSEV, Vladimir Alekseyevich.

[Atomic energy] Atomnaia energiia. Izd.3. Moskva, Gos.izd-vo tekhn.-teoret.lit-ry, 1955. 63 p. (Nauchno-populiarnaia biblioteka, no.72) (MIRA 11:1)

(Atomic energy)

LESHKOVTSEV, V.A. (Moskva)

Session of the Academy of Sciences of the U.S.S.R. on the peaceful uses of atomic energy. Fiz. v shkole 15 no.6:7-15 N-D '55. (MLRA 9:2)
(Atomic power) (Radioactive tracers)

LESHKOVTSEV, V.A.

Session of the Academy of Sciences of the U.S.S.R. on the peaceful use of atomic energy. Usp.fiz.nauk 57 no.3:503-517 N '55. (MLRA 9:2)
(Atomic power)

SHASKOL'SKAYA, Marianna Petrovna; LESHKOVTSEV, V.A., redaktor; KUZNETSOVA, Ye.B., redaktor; MURASHOVA, N.Ya., tekhnicheskiy redaktor.

[Crystals] Kristally. Moskva, Gos.izd-vo tekhniko-teoret.lit-ry, 1956. 228 p. (Crystals) (MLRA 9:6)

VOSKOBOYNIK, David Izrailevich; LESHKOVTSEV, V.A., redaktor; LIVSHITS, B.L., redaktor; TUMARKINA, N.A., tekhnicheskiy redaktor

[Nuclear energy] Iadernaia energetika. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 168 p. (MLRA 9:12)
(Atomic power)

EINSTEIN, Alfred; INFELD, Leopold; SUVOROV, S.G.[translator]; IMSHENETSKIY, V.A., redaktor; LIVSHITS, B.L., redaktor; TUMARKINA, N.A., tekhnicheskiy redaktor

[The evolution of physics; the growth of ideas from early concepts to relativity and quanta. Translated from the English] Evoliutsiia fiziki; razvitie idei ot pervonachal'nykh poniatii do teorii otnositel'nosti i kvant. Perevod s angliiskogo s vstup. stat'ei S.G. Suvorova. Izd. 2-oe. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 279 p. (MLRA 10:4)
(Physics--History) (Relativity (Physics))
(Quantum theory)

ADIROVICH, E.I.; LEBEDEV, V.A., redaktor; LIVSHITS, B.L., redaktor; TUMARKINA, N.A., tekhnicheskiy redaktor

[Some questions on the theory of luminescence of crystals] Nekotorye voprosy teorii liuminestsentsii kristallov. Izd.2-oe. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 350 p. (MLRA 10:3)
(Luminescence) (Crystallography)

NELIPA, Nikolay Fedorovich, kand.fiz.-matem.nauk; FAYNBOYM, I.B., red.; LESHKOVTSEV, V.A., spets.red.

[Atomic energy and nuclear reactors; explanatory text to a set of posters] Atomnaia energiia i iadernye reaktory; poiasnenie k serii plakatov. Moskva, Izd-vo "Znanie," 1957. 36 p. (MIRA 14:1)

(Atomic energy) (Nuclear reactors)

LESHKOVTSEV, V.A

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PHASE I BOOK EXPLOITATION

Tsesevich, Vladimir Platonovich

Mezhdunarodnyy geofizicheskiy god (International Geophysical Year) Moscow, Gostekhizdat, 1957. 135 p. 50,000 copies printed.

Eds.: Leshkovtsev, V.A., and Livshits, B.L.; Tech. Ed.: Brudno, K.F.

PURPOSE: The pamphlet is for the general reader.

COVERAGE: The pamphlet summarizes in popular form the main tasks and problems of the program of the International Geophysical Year (IGY). The author does not discuss individual Soviet achievements or contributions. However, there are scattered pieces of information on Soviet institutes and their agenda in connection with the IGY program. The observatories of Moscow, Pulkovo (Leningrad) and Tashkent regularly transmit correct-time signals. Studies of the composition of the outer atmosphere are conducted at 287 Soviet stations. Soviet seismological endeavor is centered at the observatories of

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International Geophysical Year

Murmansk, Vyborg, Barentsburg (Spitsbergen), Petropavlovsk (Kamchatka), Vladivostok, and Yuzhno-Sakhalinsk. A map on page 54 shows the routes of the Soviet expedition ships Vityaz', Okean, Ob', Ekvator, Sevastopol', and Lomonsov. The author surveys in a very general way the recent Soviet expedition to Antarctica. Photographic observations of meteors has been assigned to the Ashkhabad Astrophysical Observatory, the Stalinabad Astronomical Observatory, the university observatories of Odessa and Kiyev, and the Main Astronomical Observatory of the USSR Academy of Sciences. Instrumental (i.e. photographic) observations of auroras are done at 33 Soviet stations, among them 2 drifting stations known as "Severnyy polyus" and 3 stations in Antarctica. In addition, auroras are studied by radar observations at 5 other stations, one of which is established in the center of the Arctic. Zodiacal light is studied at the Ashkhabad Astrophysical Observatory. The All-Union Astro-Geophysical Society, under the auspices of the astronomic observatory of Leningrad University, studies the phenomenon of nacreous clouds. The author dedicates a whole chapter to the first two Soviet satellites. Atmospherics are studied at the following

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radio-goniometric points: Vladivostok, Voyeykovo, Minsk, Magdagachi (Amurskaya oblast'), Krasnaya Pakhra (southwest of Moscow), Khabarovsk, and Yuzhno-Sakhalinsk. Solar-corona studies have been developed at two stations established for this particular purpose near Kislovodsk and Alma-Ata. The stations also conduct observations on solar flares and radiation. Studies of solar spectrum are conducted at the Crimean Astrophysical Observatory, referred to by the author as one of the largest in Europe. The Crimean Observatory is equipped with a huge telescope; the photograph of the telescopic tower of this Observatory is on page 129. Two maps on pages 132 and 133 show the localities of the principal Soviet observatories conducting studies for the IGY program. There are altogether 44 drawings and illustrations, but no references.

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LESHKOVTSEV, V N

3(1); 29(0) PHASE I BOOK EXPLOITATION SOV/2539

Levantovskiy, Vladimir Isaakovich, Vladimir Alekseyevich Leshkovtsev, and Il'ya Yevgen'yevich Rakhlin

Sovetskaya raketa issleduyet kosmos (The Soviet Rocket Investigates the Cosmos) Moscow, Fizmatgiz, 1959. 127 p. 50,000 copies printed.

Eds.: K. P. Gurov and L. V. Samonenko; Tech. Ed.: K. F. Brudno.

PURPOSE: This booklet is intended for the general reader interested in rocket and satellite extraterrestrial exploration.

COVERAGE: Though intended for the layman this booklet contains much of interest to the space technologist and geophysicist. It provides detailed information on the technology and theory of Russian satellites and rockets, and on the structure, composition, and phenomena of outer space. Soviet scientists state that Soviet rockets are not only able to carry very large payloads into space at the greatest speeds, but that they possess highly accurate guidance systems as well. The

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authors report that the Soviet cosmic rocket's flight was pre-controlled (preset) to a distance of 500,000 km by a radio system operating at 183.6 megacycles. In order to follow the rocket's progress a method [not further identified by the author] was developed to increase the rocket's visibility at great distances. To allow visual observations at distahces up to 500,000 km the rocket was equipped to discharge an atomic sodium vapor cloud which could be seen for a 1-2 minute period. The dispersion and evaporation was effected through the combustion of a thermite mixture. The thermite was ignited by a small device governed by a quartz clock. This raised the temperature to 3,500°. On January 3, 1959 at $3^h\ 56^m\ 20^s$ Moscow time, when the cosmic rocket was at a distance of 113,000 km, an artificial comet with sodium vapor clouds about 100 km wide appeared in the sky. The rocket was best observed from the southern parts of the USSR. Information obtained from the rocket disproves previously held ideas on the nature of the Earth's magnetic field. It appears that the basic sources of the Earth's magnetic field are powerful electrical currents flowing in the Earth's highly conductive liquid core. If this hypothesis is correct, then it follows that only those planets with central liquid cores can have permanent

The Soviet (Cont.)

magnetic fields. Studies conducted with rockets and satellites have also shown that disturbances in the Earth's magnetic field are caused by strong currents flowing in the ionosphere. The booklet refers to V. A. Yegorov's article, O nekotorykh zadachakh dinamiki poleta k Lune [Some Problems of the Dynamics of Flight to the Moon] in Uspekhi fizicheskikh nauk, Vol. LXIII, Nr 1, 1957. This article summarizes the mathematical studies conducted by the Institute of Mathematics AN SSSR (February 1956) on various possible trajectories for flights to and around the Moon. The technical characteristics of all artificial satellites, both Soviet and American, launched up to March 1, 1959, and the instruments carried by the three Sputniks and the Soviet cosmic rocket are listed in several tables. No references are given.

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The Soviet (Cont.) SOV/2539

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SOV/35-59-8-30/45

AUTHOR: Leshkovtsev, V.

TITLE: Problem Number One

PERIODICAL: Nauka i zhizn', 1959, Nr 8, pp 73-74 (USSR)

ABSTRACT: The article is a review of the book " Iskusstvennoye solntse" (Artificial Sun) written by Gleb Anfilov and published by the Publishing House for Children's Literature, Moscow, in 1959. There is 1 photograph and 1 Soviet reference.

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SOV/47-60-1-2/46

AUTHOR: Leshkovtsev, V.A. (Moscow)

TITLE: Physical Research in Cosmic Space

PERIODICAL: Fizika v shkole, 1960, Nr 1, pp 5-17 (USSR)

ABSTRACT: The problems connected with the study of cosmic rays, of the earth's radiation, of the corpuscular radiation from the sun, of the interplanetary gas substance, of meteor particles, and of the moon are discussed in this article. After many years of study, scientists succeeded in discovering the composition of cosmic rays at sea level and at small altitudes as well as some other data concerning these rays, but many problems remained unsolved, e.g. the origin of this radiation, the acceleration mechanism of the particles that gives them such gigantic energies, whether they include any nuclei heavier than nickel and gamma-quantum, and the degree of cosmic radiation danger to human beings flying in outer space. In order to solve these problems, it was

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necessary to lift complicated registering apparatus to the limits of the earth's atmosphere, and farther into the cosmos. Such apparatus was installed in the Soviet artificial satellites and cosmic rockets. Their purpose was: to measure the full intensity of cosmic rays and the variations in this intensity; to determine the distribution of the intensity of radiation in different sections of the near-to-earth and cosmic spaces; to determine the presence of gamma-quantums in the primary cosmic rays, and the study of heavy nuclei. For the registration of the intensity of cosmic radiation, Geiger-Müller counters were used in the satellites and rockets (Figures 1 - 2). The data obtained made it possible to continue the curve of full intensity of cosmic rays to a distance of 400,000 km. We also now have the first data concerning their intensity near the moon. In the greater part of the cosmic space investigated the intensity of cosmic rays is small;

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on every square centimeter only two particles fall per second. The relationship of the intensity of cosmic radiation to the geographical latitude and longitude to the height of about 1,000 kilometers has been established. If the primary cosmic rays included any γ-quanta without an electrical charge, they would spread in cosmic space rectilinearly, so, having determined the direction of their spread, it would be possible to determine the source of radiation. For the search for γ-quanta in the primary cosmic rays, and for registering the Roentgen radiation quanta, created by the comparitively small energy particles, luminescent counters were installed in the third artificial satellite and in the cosmic rockets. Their sensitivity to γ-quanta is approximately hundred times higher than that of the Geiger-Müller counters. Their basic part consists of a transparent cylindrical sodium iodide crystal connected with a photomultiplier (Figure 3). More

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details of these counters are given. These counters showed that near the geomagnetic poles, in the zone where Aurora Borealis often occur, the intensity of the photons is considerably higher than in other parts of the globe. Preliminary data concerning the γ-quanta of the primary cosmic radiation have also been obtained. Data obtained with great difficulty before the launching of the satellites, indicated that among the primary cosmic particles, nuclei of elements heavier than nickel were absent. As this fact is of great importance not only for the theory of the origin of cosmic rays, but also for the cosmogonical theory of the origin of elements in the Universe, it was necessary to check it by direct measurements outside the limits of the atmosphere. Besides, it was desirable to find out the intensity of nuclei of heavy elements in the primary cosmic rays. To solve these problems devices with counters working on the basis of the Yavlov-

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Cherenkov effect were installed in the third artificial satellite and cosmic rockets. The Soviet physicists P.A. Cherenkov, N.Ye. Tamm and N.M. Frank were awarded the 1958 Nobel prize for the discovery and explanation of this effect. The essence of the effect is explained. The main part of the device for registering heavy nuclei consists of a small cylinder made of Plexiglas joined to a photomultiplier (Figure 4). The registration arrangement marks hits by particles with $Z > 15$. Figure 5 shows the general view of the apparatus. The measurements showed that if there are any heavy nuclei with $Z > 30$ in the cosmic rays, their number is quite insignificant. The first cosmic rocket weighed (container, apparatus and batteries) 361.3 kg. It contained three transmitters: one of 19.997 and 19.995 megacycles; one of 19.993 megacycles for scientific data; and one of 183.6 megacycles for determining the trajectory; apparatus for the

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creation of an artificial comet; a multichannel telemeter. The second cosmic rocket weighed (container, apparatus and batteries) 390.2 kg. It had three transmitters: one of 20.003 and 19.997 megacycles; one of 19.993 and 39.986 megacycles; and one of 183.6 megacycles for determining the trajectory; apparatus for the creation of an artificial comet; a multichannel telemeter. The third cosmic rocket weighed 435 kg. Measurements of the intensity of radiation at different distances from the Earth with the aid of satellites and cosmic rockets led to the discovery of an extremely important phenomenon; the existence of radiation belts of the Earth. The honor of this discovery belongs to the Soviet Physicists S.N. Vernov and A.Ye. Chudakov, and to the American physicist Van Allen. It appeared that the Earth is surrounded by two huge belts with a high concentration of charged particles (Figure 6). The inner belt, which in the region of the equator

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creation of an artificial comet; a multichannel telemeter. The second cosmic rocket weighed (container, apparatus and batteries) 390.2 kg. It had three transmitters: one of 20.003 and 19.997 megacycles; one of 19.993 and 39.986 megacycles; and one of 183.6 megacycles for determining the trajectory; apparatus for the creation of an artificial comet; a multichannel telemeter. The third cosmic rocket weighed 435 kg. Measurements of the intensity of radiation at different distances from the Earth with the aid of satellites and cosmic rockets led to the discovery of an extremely important phenomenon; the existence of radiation belts of the Earth. The honor of this discovery belongs to the Soviet Physicists S.N. Vernov and A.Ye. Chudakov, and to the American physicist Van Allen. It appeared that the Earth is surrounded by two huge belts with a high concentration of charged particles (Figure 6). The inner belt, which in the region of the equator

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is about 1,000 kilometers distant from the Earth, contains electrons of considerable energy and protons with an energy of the order of 100 Mev. Such radiation is dangerous for future cosmic travellers. The outer belt stretches approximately from 10,000 to 50,000 kilometers above the Earth's surface. The question of the origin of the charged particles in the belts of natural radiation still remains unanswered. The most trustworthy answer is the supposition of S.N. Vernov, A.E. Chudakov and A.I. Lebedinskiy that they represent protons and electrons, formed during the disintegration of free neutrons. The Soviet physicists N.V. Pushkov and S.Sh. Dolginov, analyzing the measurements made by the magnetometer in the first cosmic rocket, discovered that in the radiation belts there are "ordered" (uporyadochennyye) electric currents, whose magnetic poles change the picture of the Earth's magnetic field at great heights. The third arti-

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ficial satellite and cosmic rockets were equipped with instruments for the study of the corpuscular radiation from the Sun. Figure 7 is a diagram of such an instrument in the third satellite for the registration of electrons in this radiation and figure 8 its general view. Two fluorescent screens of zinc sulfide (resembling television screens) served as electron receivers. They were covered with aluminum foil 0.0008 g/cm^2 and 0.004 g/cm^2 thick respectively. The data obtained showed that even when the ionosphere is in a quiet state there are powerful corpuscular flows of electrons having an energy of the order of 10,000 ev and more at the limit of the atmosphere. To decide the question concerning the composition and density of interplanetary gas, the scientists used proton traps, installed in the third satellite and cosmic rockets. Those on the first and second cosmic rockets consisted of three concentrically arranged hemispheres;

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two metal nets and a solid central hemisphere - the proton receiver. The electric field of the nets gathers on the receiver all the protons entering the trap and pushes out all the electrons. According to preliminary data, the proton traps of the cosmic rockets revealed, in the space between the Earth and the Moon, regions where the concentration of protons is less than 100 per cubic centimeter. For the direct registration of meteor particles, a ballistic piezoelectric pickup was developed for use in the satellites and cosmic rockets. Its receiving arrangement consists of a massive metal plate, hanging on a flat spring, to the corners of which are attached four piezoelectric ammonium phosphate plates. When the meteor particle hits the metal plate the impulse that it receives is transmitted to the piezoelectric plates, which contract and become electrified. The strength of the electric signal obtained is proportional to the

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energy of the striking particle. A special registration arrangement divides the signals, depending on their strength, into several groups, counts their number in each group, and passes on this information to a telemeter. The pickup is so sensitive that it registers meteor particles with a mass of only one milliardth part of a gram. The data obtained show that the meteor danger is not so great: a rocket can collide with a meteor particle of 1 g, approximately, once in 14,000 hours, but even from such a rare particle one can easily be protected by armour 1 cm thick. Owing to the Soviet rockets, much new information has been obtained about the moon and cosmic space surrounding it. It has been proved with an accuracy of up to 60 gammas that the moon has no magnetic field, and therefore no radiation belt. The Soviet astronomer N.A. Kozyrev recently discovered and photographed an eruption of gases in the region of the Moon crater Alfons. The third

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Soviet cosmic rocket carried into the cosmos the first automatic interplanetary station, which carried equipment for taking photographs of the invisible side of the moon and transmitting them to the Earth, and also numerous instruments for investigating the physical properties of space near the Moon. In forty minutes a great number of photographs of the Moon were taken from a distance of 60 to 70 thousand kilometers from its surface. Figure 9 shows a general view of the interplanetary station and figure 10 the disposition of its parts. The transmission of the photographs was started from a distance of 470,000 kilometers from the Earth and was conducted in two rhythms: a slow one at great distances from the Earth, a a quick one at comparatively small distances. At a signal from the Earth, a special orientation system put the station in the position shown in figure 11. Having taken the photographs the station automatically developed them,

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and after a new signal from the Earth, began to transmit information about the pictures obtained. The transmission was accomplished through the radio link line, which also served for determining the station's motion parameters and for the transmission of scientific data registered by different instruments. The method employed was analogous to the method by which television centers transmit cinema films. Photographs of the invisible side of the Moon are shown on the centerfold. The Komissiya Akademii nauk SSSR (Commission of the Academy of Sciences of the USSR) under the chairmanship of the distinguished Soviet astronomer A.A. Mikhaylov confirmed the names given to the newly discovered parts of the Moon. The names are mentioned. There are 4 photographs, 5 drawings, 4 diagrams, and 1 table.

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S/047/60/000/04/05/034
B013/B056

AUTHOR: Leshkovtsev, V. A. (Moscow)

TITLE: Discovery of a New "Elementary" Particle

PERIODICAL: Fizika v shkole, 1960, No. 4, pp. 15 - 16

TEXT: A report is given on the discovery made in March 1960 by V. I. Veksler and the Chinese Professor Van Gan-chan and a group of scientists operating under their supervision at the laboratoriya vysokikh energiy Ob"yedinennogo instituta yadernykh issledovaniy (High-energy Laboratory of the Joint Institute of Nuclear Research) at Dubna near Moscow. The group consisted of the following scientists: Soviet physicists: N. M. Viryasov, Ye. N. Kladnitskaya, A. A. Kuznetsov, A. V. Nikitin, M. I. Solov'yev; Chinese scientists: Van Tsu-tszan and Din Da-tsao; the Czechoslovakian I. Vrana, the Korean Kim Khi In, the Vietnamese Nguyen Din Ty, and the Romanian A. Mikhul. They discovered a particle which had been predicted by scientists but not yet discovered, the $\bar{\Sigma}^-$-hyperon. It is the antipode of the ordinary Σ^--hyperon. In the

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Discovery of a New "Elementary" Particle

S/047/60/000/04/05/034
B013/B056

experiments carried out by the scientists, 40,000 photographs of tracks of fast π-mesons were investigated in a bubble chamber. As a result of this lengthy investigation it was possible to discover a distinct track of the $\tilde{\Sigma}^-$-hyperon on one of the pictures, which is shown in the figure on p. 16. The $\tilde{\Sigma}^-$-hyperon found has a positive electric charge. Its mass is near 2,340 m_e, and its life-time is of the order of $1.2 \cdot 10^{-10}$ sec. It decayed into an antineutron and a π^+-meson, which fact fully corresponded with the decay mode expected. In a footnote Ya. B. Zel'dovich is mentioned. There are 1 figure and 1 Soviet reference.

Card 2/2

LESHKOVTSEV, V.A. (g.Moskva)

Academician Igor' Vasil'evich Kurchatov; obituary. Fiz. v shkole 20 no.3:21-22 My-Je '60. (MIRA 13:11)
(Kurchatov, Igor' Vasil'evich, 1903-1960)

LESHKOVTSEV, V.A. (Moskva)

Comments on G.Zhdanov and I.Tindo's book "Laboratories in space." Reviewed by V.A.Leshkovtsev. Fiz.v shkole 20 no.4:103-104 Jl-Ag '60. (MIRA 13:8)
(Cosmic physics) (Zhdanov, G.) (Tindo, I.)

LESHKOVTSEV, Vladimir Alekseyevich; LEVENSHTEYN, G.V., red.;
SAVCHENKO, Ye.V., tekhn. red.

[Physics of cosmic space] Fizika kosmicheskogo prostranstva. Moskva, Izd-vo "Znanie," 1961. 39 p. (Narodnyi universitet kul'tury: Estestvennonauchnyi fakul'tet, no.16) (MIRA 15:1)
(Cosmic physics)

ARTSIMOVICH, Lev Andreyevich. Prinimal uchastiye SAGDEYEV, R.Z.; LESHKOVTSEV, V.A., red.; LIVSHITS, B.L., red.; BRUDNO, K.F., tekhn. red.

[Controlled thermonuclear reactions] Upravliaemye termoiadernye reaktsii. Moskva, Gos. izd-vo fiziko-matem. lit-ry, 196[illegible]. 467 p. (MIRA 14:9)

(Thermonuclear reactions)

LESHKOVTSEV, V.A. (Moskva)

Prominent scientists: Academician D.V. Skobel'tsyn.
Fiz. v shkole no.1:24-25 Ja-F '61. (MIRA 14:2)
(Skobel'tsyn, Dmitrii Vladimirovich, 1892-)

SMORODINSKIY, Ya·ov Abramovich; LESHKOVTSEV, V.A., nauchnyy red.; SHUSTOVA, I.B., red. izd-va; ATROSHCHENKO, L.Ye., tekhn. red.

[Elementary particles] Elementarnye chastitsy. Moskva, Izd-vo "Znanie," 1962. 45 p. (Narodnyi universitet kul'tury: Estestvennonauchnyi fakul'tet, no.1) (MIRA 15:5)
(Particles (Nuclear physics))

LESHKOVTSEV, V.A.

Books on physics published and to be published by the State Publishing House for Physics and Mathematics Literature in 1962. Usp.fiz.nauk 77 no.3:561-566 Jl '62. (MIRA 15:7)
(Bibliography--Physics) (Bibliography--Mathematics)

LESHKOVTSEV, Vladimir Alekseyevich; SHUSTOVA, I.B., red.; RAKITIN, I.T., tekhn. red.

[Horizons of science]Gorizonty nauki. Moskva, Izd-vo "Znanie," 1963. 47 p. (Narodnyi universitet kul'tury: Estestvennonauchnyi fakul'tet, no.1) (MIRA 16:1)
(Technological innovations) (Science news)

STANYUKOVICH, Kirill Petrovich; LESHKOVTSEV, V.A., red.

[The gravitational field and elementary particles] Gravitatsionnoe pole i elementarnye chastitsy. Moskva, Nauka, 1965. 310 p. (MIRA 18:6)

[illegible]KENSHTEYN, [illegible] Vladimirovich; [illegible], V.A., red.

[illegible]; introduction to molecular bio-
[illegible]; vvedenie v molekuliar[illegible]
[illegible]. Moskva, Nauka, 1965. [illegible]

LESHKOVTSEVA, I.I.; MININA, Ye.G.

Cytochemical study of the male sporogenous cells of balsam poplar in connection with sexualization problems. Fiziol. rast. 12 no.5: 832-836 S-O '65. (MIRA 19:1)

1. Laboratoriya lesovedeniya AN SSSR, Moskovskoy oblasti.

LESHKOVTSEVA, V.S., inzhener.

Investigating the effect of residual austenite on properties of the surface layer of cyanided structural steel. [Trudy] MVTU no.41:67-83 '55. (MLRA 9:10)

(Cyanide process) (Steel--Metallography)

LESHKOVTSEVA, V.S.

137-58-1-1285 D

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 172 (USSR)

AUTHOR: ~~Leshkovtseva, V.S.~~

TITLE: An Investigation of the Effect of Residual Austenite on the Properties of the Cyanided Layer of Structural Steels (Issledovaniye vliyaniya ostatochnogo austenita na svoystva tsianirovannogo sloya konstruktsionnykh staley)

ABSTRACT: Bibliographic entry of the author's dissertation for the degree of Candidate of Technical Sciences, presented to the Mosk. vyssh. tekhn. uch-shche (Moscow Technical College), Moscow, 1957

ASSOCIATION: Mosk. vyssh. tekhn. uch-shche (Moscow Technical College), Moscow

1. Structural steels--Cyanide layer properties 2. Austenite--Effects

Card 1/1

ACC NR: AP7006683 SOURCE CODE: UR/0145/66/000/010/0154/0158

AUTHOR: Korneyev, B. F. (Engineer); Leshkovtseva, V. S. (Candidate of technical sciences); Moiseyev, D. T. (Engineer, deceased); Tanyrkina, N. I. (Engineer)

ORG: None

TITLE: Investigation of the effect of forging and heat treatment on the fatigue strength of welded joints made from OKh18N10 steel

SOURCE: IVUZ. Mashinostroyeniye, no. 10, 1966, 154-158

TOPIC TAGS: FATIGUE STRENGTH, steel forging, weld heat treatment, weld evaluation, sheet metal, heat expansion, pipeline, STEEL / OKh18N10 STEEL

ABSTRACT: OKh18N10 sheet steel 1.4 mm thick is studied to determine the effect of heat treatment and forging on the strength and durability of welded seams and on the durability of flexible elements made from this grade of steel. The chemical composition of the material is: C--0.056%; Cr--18.0%; Ni--10.0%; Mn--0.84%, Si--0.53%. Argon-arc welding was used with a permanent tungsten electrode 3 mm in diameter and O4Kh19N9 welding rod. The fatigue tests were done on a base of $5 \cdot 10^{6}$ cycles at a frequency of 1450 cycles per minute. Durability under severe bending deformation was tested at a frequency of 60 cycles per minute. It was found that aging of welded joints made from OKh18N10 steel at 600°C in the post-deformation state does not reduce the fatigue limit. However, welding reduces the fatigue limit of the given grade of

Card 1/2 UDC: 66.046

ACC NR: AP7006685

steel in the cold-worked state (33% elongation) by a factor of 1.5. Similar behavior is observed in durability tests at working deformations from 0.3 to 0.5%. The experimental results show that OKh18N10 steel and joints welded from this material have maximum cyclic strength indices in the post-deformation state without subsequent heat treatment. Welded joints may be forged or rolled to increase the durability of temperature-compensating pipeline connectors made from this grade of steel. The article was presented for publication by Doctor of technical sciences I. I. Eldorin, Professor at the Moscow Technical College im. N. E. Bauman. Orig. art. has: 2 figures, 1 table.

SUB CODE: 11, 13/ SUBM DATE: 21Mar66/ ORIG REF: 005

Card 2/2

LEBEDEV, N. N., and KUSNETSKIY, A. S.

"Surface activity and particle size of carbon blacks," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 2 Jan-2 Feb 57, Moscow, Rubber Research Inst.

B-3,084,399

1. LESHNEVSKIY, P. K.; KOMAROVSKAYA, A. S.

2. USSR 600

4. Railroads, Narrow-Gauge

7. High-speed construction of narrow-guage spur tracks, Les. prom, 13, No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

ЩЕНОК, З. Г.

USSR/Virology. Viruses of Man and Animals E

Abs. Jour : Ref Zhur-Biol., No 13, 1958, 57379

Author : Strigin V. A., Bychkova V. M., ~~Vasileva~~ Vasileva A. F., Golovina A. F., Zaynutdinova L. Kh., Lagne N. M., ~~Shchenok Z. G.~~, Prutkovskaya N. T., Sudakova A. F.

Inst : ~~Ufa Scientific~~-Research Institute of Vaccines and Sera

Title : Experimental Study of the Epidemiological Effectiveness of Antiinfluenza Vaccination

Orig Pub : Tr. Ufimsk. n.-i. in-ta vaktsin i syvorotok, 1957, vyp. 4, 205-209

Abstract : Five thousand nine hundred twenty-three persons were vaccinated with dry live vaccine ("SK") of the Moscow Scientific-Research Institute of Vaccines and Sera imeni Mechnikov (4555 in the non-vaccinated group). The vaccine lowered disease

Card 1/2

Abstract : incidence by no less than 2.5 times. The reactogenesis was inconsiderable. One series of vaccines was found to be ineffective.

Card 2/2

Mathematical Reviews
Vol. 14 No. 8
October 1953
Analysis

Lesovol, B. V. A measure of area in a two-parameter family of curves on a suface. Trudy Sem. Vektor. Tenzor. Analizu 6, 447-493 (1948). (Russian)

The paper contains contributions to the following problem. A two-parameter system of curves is given on a surface F. When is it possible to introduce a measure for the curves such that (a) if S_1 and S_2 are sets of curves without a common element, then $\sigma(S_1)=\sigma(S_2)$, (b) if under an (intrinsically) isometric mapping of F on F^* the set of curves S goes into S^*, then $\sigma(S)=\sigma(S^*)$?

The curves are considered as sets of line elements and measure is defined in terms of two distances: the distance of the points carrying the line elements and the deviation of the directions of the line elements. The resulting formalism is much too involved to be outlined here. The problem is not solved in general, but for certain special distances. For instance, in geometric measure the point distance is the length of the arc A of the curve of the given system Σ through the two points and the deviation of the directions is the angle between one direction and the direction obtained from the other by parallel transport along A. It is shown that a geometric measure exists for a curve-system Σ if and only if the curves of Σ through a given point p have at p all the same geodesic curvature.

Measures invariant under conformal mapping are also discussed and they are connected with geometric measure by the following theorem. For a given curve-system Σ on a given surface F there exists an intrinsically unique surface F^* on which F can be mapped conformally such that Σ goes into a system $\bar{\Sigma}$ for which the geodesic curvatures behave as above. *H. Busemann* (Los Angeles, Calif.).

BARON, L.I.; GUSHCHIN, V.V.; LESHTAYEV, V.V.

Quantitative evaluation of the effective crumbling of ore in a long chute at the Yuksper mine. Izv. Kar. i Kol'. fil. AN SSSR no.1:146-150 '59. (MIRA 12:9)

1. Institut gornogo dela AN SSSR i kombinat "Apatit".
(Ore dressing)

S/149/62/000/006/005/008
A006/A101

AUTHORS: Motov, D. L., Leshtayeva, T. G.

TITLE: Extraction method of separating zirconium and hafnium with cyclohexanone from sulfuric acid solutions

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, no. 6, 1962, 113 - 121

TEXT: The extraction was performed by shaking a sulfuric acid solution with an equal volume of cyclohexanone in a glass separating-funnel during 3 min. Ten minutes later samples were taken off. The distribution of Zr and Hf was determined by using radioactive Hf^{181} and Zr^{95} isotopes. To contaminate the operational solutions, sulfuric acid solutions of radioactive isotopes were used; the calculated activity was 5,000 - 15,000 pulses/min.ml. Moreover, Zr distribution was determined by the gravimetric method and the Hf content by quantitative spectral analysis. The experiments were made with a solution containing 23.6 g/l ZrO_2 and 100 g/l H_2SO_4 act. It was found that without the introduction of complexforming additional agents cyclohexanone does not extract either hafnium or zirconium.

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S/149/62/000/006/005/008
A006/A101

Extraction method of separating zirconium and...

Of a series of tested inorganic and organic compounds, satisfactory results in extracting Hf into cyclohexanone and separating Zr and Hf were obtained with rhodanides, in particular with ammonia rhodanide. Regularities were revealed of extracting Hf and Zr with cyclohexanone from sulfuric acid solutions in the presence of rhodanide, depending on the content of ZrO_2 + HfO_2, H_2SO_4 $(NH_4)_2SO_4$, and upon a varying ratio between the aqueous (V_w) and organic (V_o) phases. (from 1:0.05 to 1:10). It was established that at 400 g/l NH_4CSN and more, 100 - 200 g/l H_2SO_4 acidity of the solution, up to 100 g/l ZrO_2 + HfO_2 content, and $V_w:V_o$ = 1:1, the degree of extracting Hf into the organic phase was 95 - 97.5%, the factors of separating Zr and Hf being between 60 - 140. The cyclic ketone, i.e. cyclohexanone in the presence of rhodanide-ion, is an exclusively specific and efficient extracting agent for separating Zr and Hf. The method can be used to obtain pure zirconium and hafnium concentrates. There are 6 tables and 4 figures.

Card 2/3

Extraction method of separating zirconium and... S/149/62/000/006/005/008
A006/A101

ASSOCIATION: Institut khimii i tekhnologii redkikh elementov i mineral'nogo syr'ya Kol'skogo filiala AN SSSR (Institute of Chemistry and Techniques of Rare Elements and Crude Minerals at the Kola Branch of AS USSR)

SUBMITTED: May 9, 1961

Card 3/3

S/149/63/000/001/006/008
A006/A101

AUTHORS: Motov, D. L., Leshtayeva, T. G.

TITLE: On the separation of zirconium and hafnium rhodanide complexes by extraction with cyclohexane

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, no. 1, 1963, 121 - 128

TEXT: The authors studied the distribution of CNS^-, HCNS, NH_4CNS and $(NH_4)_2SO_4$ between the aqueous and cyclohexane phases with both pure solutions of NH_4CNS, HCNS, H_2SO_4+NH_4CNS, and zirconium-containing solutions, subjected to extraction refining by cyclohexane with the use of rhodanide as a complex-forming additive. They revealed the interrelation of zirconium and hafnium extraction and the distribution of rhodanide, as a complex-forming additive, between the aqueous and cyclohexane phase. It was found that the extracted rhodanide complex of hafnium includes rhodanic acid and a non-acid rhodanide ion. The ammonium rhodanide and rhodanic acid, contained in the aqueous phase, participate in the formation of this complex and act simultaneously as its salting-out agent.

The authors studied, moreover, the behavior of the basic zirconium impurities, namely iron and titanium, in extraction-separation of zirconium and hafnium by cyclohexane. It was established that during extraction by cyclohexane in the presence of rhodanide, simultaneous refining of zirconium from titanium and iron takes place; extraction of iron and titanium rhodanide complexes by cyclohexane may be used as a basis for efficient technological methods of refining solutions from these metallic impurities. There are 4 tables and 3 figures.

ASSOCIATION: Institut khimii i tekhnologii elementov i mineral'nogo syr'ya Kol'skogo filiala AN SSSR (The Institute of Chemistry and Technology of Elements and Crude Minerals of the Kola AS USSR Branch)

SUBMITTED: July 3, 1962

MOTOV, D.L.; LESHTAYEVA, I.G.

Extractive method of separating zirconium and hafnium by cyclohexanone from sulfuric acid solutions. Izv. vys. ucheb. zav.; tsvet. met. 5 no.6:113-123 '62. (MIRA 16:6)

1. Institut khimii i tekhnologii redkikh elementov i mineral'nogo syr'ya Kol'skogo filiala AN SSSR.
(Zirconium—Metallurgy)
(Hafnium—Metallurgy)
(Hydrometallurgy)

44688
S/869/62/000/000/012/012
B102/B186

AUTHORS: Broder, D. L., Leshuk, A. I., Sadokhin, I. P., Suvorov, A. P.

TITLE: Inelastic scattering of neutrons from iron nuclei

SOURCE: Teoriya i metody rascheta yadernykh reaktorov; sbornik statey. Ed. by G. I. Marchuk. Moscow, Gosatomizdat, 1962, 254 - 259

TEXT: The aim of the work was to determine the energy dependence of the inelastic scattering cross section in the range 0.80 - 4.0 Mev by analyzing experimental data as accurately as possible. Supplementary experiments were carried out to provide missing data. The reaction $T^3(p,n)He^3$ was used as a source of neutrons for the 0.80 - 2.5 Mev range, and $D(d,n)He^3$ for 2.5 - 4 Mev. The γ-ray detector was an NaI(Tl) crystal with a ФЭУ-13(FEU-13) photomultiplier. Hence the pulses were fed through an amplifier to a 128-channel pulse-height analyzer. The investigations were carried out for the components of the most abundant natural isotopic composition: 91.68 % Fe^{56}, 5.48 % Fe^{54}, 2.17 % Fe^{57} and 0.31 % Fe^{58}. The cross sections of the γ-quantum yield when neutrons of various energies

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S/869/62/000/000/012/012
B102/B186

Inelastic scattering of neutrons ...

are inelastically scattered were measured. The following values of E_γ were found for E_n = 4.0 Mev: 0.84, 1.02, 1.23, 1.44, 1.81, 2.15, 2.6 Mev. With the exception of 1.41 Mev, all these are associated with scattering from Fe^{56} levels. 1.41 Mev is attributed to scattering from the first Fe^{54} level. The other E_γ are assigned as follows: 1.23 Mev appears when the 2.08 Mev level is excited and then de-excited via the 0.84 Mev level to the ground state. 1.81 Mev is attributed to excitation and cascade de-excitation of the 2.62 Mev level. 2.15 Mev quanta are emitted when the 3.02 Mev level decays via 0.84 Mev to the ground state. The 0.84 Mev quanta are the result of direct transitions from this level to the ground state. In some cases the cross sections obtained differ considerably from the calculated values. There is 1 figure.

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LESHCHIKOV, N.D.

8(5) PHASE I BOOK EXPLOITATION SOV/1566

Moscow. Nauchno-issledovatel'skiy institut postoyannogo toka

Peredacha energii postoyannym i peremennym tokom (Power Transmission by Direct and Alternating Current) Moscow, Gosenergoizdat, 1958. 334 p. (Series: Its: Izvestiya, sb. 3) 5,350 copies printed.

Ed.: Platonov, A.N.; Tech. Ed.: Voronetskaya, L.V.; Editorial Board: Shchedrin, N.N., Doctor of Technical Sciences, Corresponding Member, Uzbek SSR Academy of Sciences, Professor (Chief Ed.); Gertsik, A.E., Engineer; Temel'yanov, V.I., Candidate of Technical Sciences; Pimenov, V.P., Candidate of Technical Sciences; Platonov, A.K., Candidate of Technical Sciences; Posse, A.V., Candidate of Technical Sciences; Sena, L.A., Doctor of Physical and Mathematical Sciences, Professor; Sosnin, N.N., Engineer; Shneyberg, M.G., Candidate of Technical Sciences.

PURPOSE: This collection of articles, issued by the USSR Ministry of Electric Power Stations, is intended for scientists, engineers and designers of high-voltage overhead transmission lines.

Card 1/13

Leshchikov, N.D. Damping of Voltage Oscillations in Overhead D-C Transmission Lines (as applied to the Stalingrad-Donbass Transmission Line) 161

Theoretical and experimental investigations were carried out by VEI and NIIPT in the experimental Kashira-Moscow d-c transmission line on damping of voltage oscillations. Technical data from the Sweden-Gotland d-c transmission line were used by the author. The results of these investigations were put into practice in the Stalingrad-Donbass transmission line, chiefly according to recommendations of M.G. Shneyberg, V.N. Zyatkovskiy, V.N. Vyatkin, N.A. Shenshchenko and A.A. Akopyan. There are 11 oscillograms and diagrams and 5 references, of which 2 are Soviet, 1 English, 1 Swedish, and 1 German.

Card 7/13

LESHUKOV, N.D., Cand Tech Sci -- (diss) "Limitation ~~on the interior~~ overvoltage in over-head lines, ~~for the~~ transmission ~~of direct current.~~" Len, 1959, 16 pp with illustrations (Min of Higher Education USSR. Len Polytechnic Inst im M. I. Kalinin) 150 copies (KL, 33-59, 114)

KRYLOV, M.T.; LESHUKOV, N.D.; SHIPULINA, N.A.

Interruption of direct current transmission by means of special cutout devices during normal operation. Izv. MIIPT no.5:64-79 '60. (MIRA 14:1)

(Electric cutouts)
(Electric power distribution—Direct current)

LESHUKOV, N.D.

Transient processes in overhead d.c. power transmission lines.
Izv. MIIPT no.5:80-100 '60. (MIRA 14:1)
(Electric power distribution—Direct current)
(Transients (Electricity))

LESHUKOV, N.D.; SHIPULINA, N.A.

Transient processes in d.c. power transmission system with an intermediate substation. Izv. NIIPT no.7:36-55 '61. (MIRA 14:9)
(Electric power distribution--Direct current)

LESHUKOV, N.D.; SHIPULINA, N.A.

Disconnecting of branch sections in a d.c. power transmission system. Izv. NIIPT no.7:56-77 '61. (MIRA 14:9)
(Electric power distribution--Direct current)

AC: NR: AT6021542 SOURCE CODE: UR/2995/65/000/011/0303/0326

AUTHOR: Kanashchenko, N. A.; Leshukov, N. D. (Candidate of technical sciences); Shipulina, N. A.

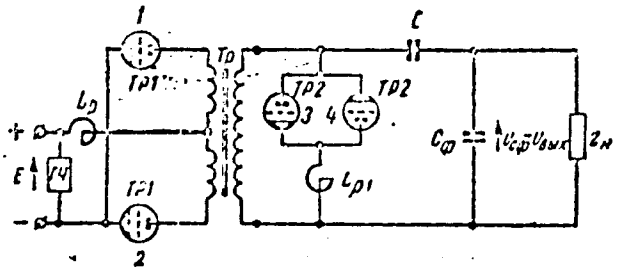
ORG: none

TITLE: Autonomous 12-kw, 220-v, 50-cps parallel-series inverter

SOURCE: Nauchno-issledovatel'skiy institut postoyannogo toka. Izvestiya, no. 11, 1965. Peredacha energii postoyannym i peremennym tokom (D.c. and a.c. power transmission), 303-326

TOPIC TAGS: dc ac inverter, autonomous inverter, thyratron, electronic current

ABSTRACT: The development of a new 12-kw, 220-v, 50-cps separately-excited parallel-series-circuit (see figure) inverter by the NIIPT institute is reported. Intended for emergency supply of telecommunication plants, the new inverter uses thyratrons, each of them being fired after the preceding one has been completely extinguished. Design data and test results of this inverter are set forth



Card 1/2

ACC NR: AT6021542

in detail; waveshapes of currents and voltages at no-load and full load are shown. Conclusions: (1) Voltages across the thyratrons and main transformer exceed the input voltage by several times; under stationary conditions, the anode voltages may reach a value 6—7 times the input voltage; the voltage across the transformer output winding is 3—4 times as high as the input voltage; (2) By proper proportioning of the series and parallel capacitances, the output voltage can be made fairly stable; (3) With high-speed automatic voltage regulation, the above inverter keeps the output voltage stable within ±3% when the input voltage varies from 200 to 240 v and the load p.f., from 1.0 to 0.8; (4) The inverter frequency varies by ±1% when the d-c input voltage fluctuates; (5) The inverter efficiency is 70%. Orig. art. has: 13 figures, 11 formulas, and 2 tables.

SUB CODE: 09 / SUBM DATE: 15Nov64 / ORIG REF: 008 / OTH REF: 006

Card 2/2

LESHUKOV, Timofey Nikolayevich

[Ivanovo economic administrative region] Ivanovskii ekonomicheskii administrativnyi raion. Ivanovo, Ivanovskoe knizhnoe izd-vo, 1959. 146 p. (MIRA 12:11)

(Ivanovo Province--Industries)

ANISIMOV, Sergey Aleksandrovich; LESHUKOV, Timofey Nikolayevich, red.

[Ivanovo Province in the seven-year plan] Ivanovskaia oblast' v semiletke. Ivanovo, Ivanovskoe knizhnoe izd-vo, 1959. 95 p. (MIRA 14:2)

(Ivanovo Province--Economic policy)

LESHUKOV, V., ryadovoy

The struggle for morality, for purity of soul. Starsh.-serzh. no.4:33 Ap '62. (MIRA 15:4)

(Military education)

KLAVIN, N.; MARKOV, A.; IVANOV, A.I.; [illegible], Yu.

For spring-summer navigation. Grazhd. av. 19 no.5:4-5 My '62.
(MIRA 15:5)

1. Spetsial'nyy korrespondent zhurnala 'Grazhdanskaya aviatsiya' (for K'avin). 2. Glavnyy inzh. Khabarovskikh lineynykh ekspluatatsionno-remontnykh masterskikh (for Markov). 3. Nachal'nik Magadanskogo aeroporta (for Ivanov). 4. Komandir Yuzhno-Sakhalinskogo aviatsionnogo podrazdeleniya (for Leshukov).